A selenium yeast product for use in food, dietary supplements or drugs containing significant and homogeneous amounts of easily digestible organically bound selenium, in which the content of selenium compounds is in the range of between 1000 and 1600 ppm, and in which product the content of 1-selenomethionine constantly constitutes at least 55% of the total selenium content, and in which product the content of selenium in inorganic selenium compounds does not exced 1% of the total selenium content. Furthermore, a method of preparing a selenium yeast product for use in food, dietary supplements, or drugs whereby said yeast is cultivated on a minimal medium under aerobic conditions, while nutrients are added to the yeast during the cultivation to an extent corresponding to the consumption of said nutrients in the yeast; glucose and/or maltose are the sole sources of carbon in the feeding medium.